

2014 SMALL GAME HUNTING PROSPECTS



Missouri Department of Conservation

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INTRODUCTION

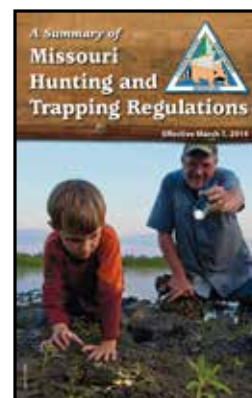
Welcome to the 2014 Small Game Hunting Prospects!

Welcome to the 2014 Small Game Hunting Prospects! Missouri Department of Conservation staff developed this new report to help small game hunters throughout Missouri learn more about the game they pursue, factors that affect the presence and abundance of game, and where to hunt various wildlife. This first edition of Small Game Hunting Prospects is different from small game reports of the past. Because our Conservation Agent's Roadside Survey for quail and pheasants was no longer providing useful information for the Small Game Status Report, the Department has developed this document, which will blend the results of population trend surveys with information on species management and hunting tips.

Every year, staff will update Small Game Hunting Prospects, covering a wide variety of small game species and highlighting conservation areas statewide where hunters can pursue them. Regular sections will include an overview of statewide weather and habitat conditions, profiles about the most popular small game species, and Managers' Notes for a sample of Quail Emphasis Areas across the state. Species profiles will include information on life history, habitat management, ongoing research, and a list of featured hunting spots for 2014. Managers' Notes will highlight management on the area and will detail hunting prospects for small game on that area.

Our intent is that new and seasoned hunters alike will use this resource to learn more about the game they hunt and try out a new hunting spot. Whether you are a new or veteran hunter, good luck! And remember — safe hunting is no accident!

For season dates, limits, permit information, and a list of areas with nontoxic shot requirements, please see the 2014 Missouri Hunting and Trapping Regulations booklet or the 2014 Migratory Bird Hunting Digest (seen below).



Whether you are a new or veteran hunter, good luck!
And remember—safe hunting is no accident!

DOVE

MOURNING DOVE
WHITE-WINGED DOVE
EURASIAN COLLARED-DOVE

ABOUT DOVES

Missouri is home to three species of dove that are legal to harvest during the state's dove hunting season. Mourning doves are the most common species found statewide, but hunters may also encounter white-winged doves or Eurasian collared-doves. White-winged doves are common to southwest states and Mexico, and Eurasian collared-doves have arrived in Missouri fairly recently and are increasingly common, especially near urban areas.

HUNTING AND MANAGEMENT

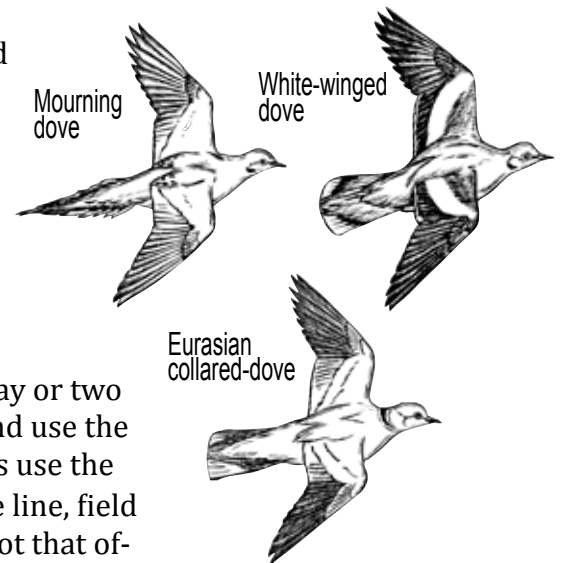
Doves are popular birds to hunt in Missouri. They are found throughout the state and are often abundant, using both wild and planted food sources. Doves are fun to hunt because they are fast, agile fliers and test a shooter's skills by twisting and turning through the air. Because doves are sensitive to hunting pressure, many dove-hunting fields are managed with no-hunting periods throughout the season so birds have the opportunity to feed without being bothered, which keeps them in the area longer.

Once you've found a likely field, the next step is to decide where in the field to hunt. If possible, scout the field a day or two before the season opens and observe how the doves enter and use the field. Oftentimes you will find that many or most of the doves use the same flight path — often along a linear feature such as a tree line, field edge, or ditch. If possible, set up along this flight path in a spot that offers concealment but still allows you to see incoming birds. A tall patch of weeds or sunflowers often offers this cover. Also, because doves regularly perch in dead limbs before entering the field to feed, look for tall dead trees or limbs near the feeding field. Decoys, including motion wing decoys, may coax birds in closer.

Mourning doves are habitat generalists, which means they use many different habitat types across their range. Therefore, it's not really necessary to conduct habitat management specifically for doves, although species benefit from many types of habitat management. The Department plants fields of seed-producing grains and sunflowers for forage and maintains low vegetation height and some bare ground to provide conditions favored by doves.



The mourning dove is Missouri's most common dove species.



**FOODS COMMONLY
PLANTED FOR DOVES**

- • • • •
- Black-oil sunflower seeds
- Millet
- Buckwheat
- Oats
- Popcorn
- Waste corn, wheat, or milo following harvest

ONGOING DOVE RESEARCH

The Department is engaged in collaborative dove research with the U.S. Fish and Wildlife Service and other states as part of our commitment to the wise stewardship of our game species. The Department participates in the National Dove Banding Program, which helps us to better understand and manage mourning dove harvest at national, regional, and statewide scales. About 3,000 small metal leg bands are placed on mourning doves annually. Since 2004, over 23,000 mourning doves have been banded across the state. Hunters have reported harvesting 2,624 doves banded in Missouri — some of which were reported from 15 other states and Mexico! Banding data are used to construct population models, which informs decisions about hunting regulations and harvest management. If you harvest a banded dove, please report the band number to 800-327-BAND, or at www.reportband.gov.

The Department also collects hunter-harvested dove wings. Hunters at some managed dove hunting areas will be asked to provide a wing from each of their harvested birds so that staff can determine the age of the birds based on feather coloration and growth. This information helps estimate dove nesting and brood-rearing success.

As part of an effort to better understand how shooting field management affects doves and hunters, several conservation areas require hunters to fill out a daily hunting card to gauge hunter success and satisfaction.

2014 FEATURED HUNTING SPOTS

This year, nearly 4,700 total acres on 93 conservation areas are actively managed for doves. Managed dove hunting fields are planted in sunflowers, wheat, millet, buckwheat, corn, or a combination of these. Each field provides a different type of hunting experience.

To locate dove fields, contact the Regional Office in the area that you'd like to hunt. Dove hunting maps are also available on the Department's website at mdc.mo.gov/18183.

Below are some suggested dove hunting opportunities:

Atlanta CA (Macon Co.)

August A. Busch CA (St. Charles Co.)

Bois d'Arc CA (Greene Co.)

Columbia Bottom CA (St. Louis Co.)

James A. Reed Memorial WA (Jackson Co.)

Locust Creek CA (Sullivan Co.)

Maintz Wildlife Preserve (Cape Girardeau Co.)

Pony Express CA (DeKalb Co.)

Robert E. Talbot CA (Lawrence Co.)

Ten Mile Pond CA (Mississippi Co.)

IF YOU HARVEST A BANDED DOVE

Please report it!

1-800-327-BAND

www.reportband.gov

We only want the band
number -- you get to keep
the band!



RABBIT EASTERN COTTONTAIL SWAMP

ABOUT RABBITS

Of the two rabbit species that may be hunted in Missouri, the eastern cottontail is the most common. Cottontails are well distributed throughout Missouri, and they provide fun, challenging hunting opportunities to novice and experienced hunters alike. Rabbits are prolific breeders, and numbers fluctuate from year to year and place to place. Overall, rabbit numbers have been declining since the mid-1950s due to loss of habitat. However, cottontails can be found in all 114 of Missouri's counties. They prefer brushy cover, dense weedy areas, and thickets. Rabbits feed almost entirely on plants. Preferred foods include grasses, wheat, and white clover. During heavy snow cover, they eat buds, twigs, bark, and sprouts to survive.

Swamp rabbits are a little larger than cottontails with shorter, rounder ears, and the tops of the hind feet are reddish-brown. Swamp rabbits are localized to lowlands along stream banks and drainages of the Mississippi River in southeast Missouri. Hunters can recognize their presence in an area by their unusual habit of leaving droppings on logs and stumps. Swamp rabbits are good swimmers and can escape predators by diving into water and paddling away. This species' numbers have been declining due to loss of lowland hardwood forests and swamps.



Eastern cottontail



Swamp rabbit

HUNTING AND MANAGEMENT

One reason for rabbit hunting's popularity is its simplicity. Some people use dogs, while others merely walk the fields and meadows — either way, it's fairly fundamental. No decoys, game calls, camouflage clothing, or high-tech gadgets are needed to provide a sporting pursuit and a tasty meal. Although some rabbit hunters won't take to the field until the first good snow, rabbit numbers are typically higher when the season starts in October than during the cold weeks of January and early February. Fall is the season when rabbit populations and protective cover are both at their highest levels. As habitat availability is reduced by winter weather and crop harvests, rabbit populations shrink.

Good cottontail habitat includes well-distributed protective cover, a good year-round food supply, and a safe place for nesting. Brush piles can be created by loosely piling brush over rocks, old culvert pipes, or other unused equipment. Keeping the brush open at the ground level allows for freedom of movement. Place piles in close proximity to other cover such as briars, fencerows, or ungrazed pastures.

Landowners in southeast Missouri can improve habitat for swamp rabbits by protecting bottomland hardwood forests from clearing and replanting areas to native tree species. These rabbits also need upland refuge to escape flooding. Again, creation of brush piles and dense vegetation increases habitat for swamp rabbits.



SWAMP RABBIT RESEARCH

It is uncertain how many swamp rabbits are in Missouri. Therefore, starting in 1992, Department biologists have surveyed for swamp rabbits on over 200 forested sites across southeastern Missouri every ten years.

Results of these surveys indicate that swamp rabbits are present throughout southeast Missouri, but that their habitat is limited and susceptible to loss through clearing for cropland or housing developments. Swamp rabbit populations continue to face challenges from large flooding events and further fragmentation of the bottomland forest on which they depend.

2014 FEATURED HUNTING SPOTS

Cottontails are abundant on many conservation areas. Below is a list of selected areas that have good cottontail populations. For more detailed information about an area, visit the Department's Conservation Atlas at mdc.mo.gov/atlas.

Cottontails

Bunch Hollow CA (Carroll Co.)

Bushwhacker Lake CA (Barton Co.)

Crowleys Ridge CA (Stoddard Co.)

Davisdale CA (Howard Co.)

Harmony Mission CA (Bates Co.)

James A. Reed Memorial Wildlife Area (Jackson Co.)

Locust Creek CA (Sullivan Co.)

Stockton Lake Managed Lands (Cedar, Dade, Polk Counties)

William G. and Erma Park White Memorial Wildlife Area (Lincoln Co.)

DID YOU KNOW?

In 2012,
Missouri hunters
harvested an
estimated 295,000
rabbits!



BOBWHITE QUAIL

ABOUT QUAIL

Known simply as “quail” or “bobwhite,” the northern bobwhite can be found in every county in Missouri. Bobwhites are so named for the male’s cheery call issued from fenceposts or other elevated perches in late spring and through summer. Bobwhites are ground-nesting birds and lay clutches of a dozen or so eggs in a nest at the base of a grass clump. Chicks hatch fully feathered and mobile and immediately begin hunting insect prey, which they depend on for rapid growth. By mid-autumn, bobwhites assemble into coveys of 10 to 15 birds and generally eat seeds. Annual mortality is high, and most bobwhite young live less than a year. The quail’s high reproductive capacity counter balances this high mortality rate, and bobwhites are capable of rapid population increase when habitat conditions are favorable.



Bobwhite quail

HUNTING AND MANAGEMENT

Few experiences afield match the heart-stopping thrill of a covey of quail exploding into flight. During hunting season, quail can be found in grassy or shrubby areas, especially near food sources. Bobwhites eat row crops such as corn and beans, but also readily consume wild seeds of ragweeds, sunflowers, and crotons. Areas with these cultivated and wild seed foods are good places to find quail, especially when brushy cover such as a plum thicket or brush pile is located nearby. A light-weight, fast swinging shotgun works well. Most hunters use size 7 ½ or 8 shot and an open choke. Savvy hunters know that, in order to be successful at putting quail in the bag, it’s important to pick out and focus on a single bird — a difficult feat when a dozen or more take to the air at once. While not necessary for quail hunting, a good bird dog aids tremendously in finding bobwhites and adds to the enjoyment of the hunt. In fact, many quail hunters enjoy the dog work even more than the challenging shooting.

Like all wildlife, quail depend on suitable habitat to thrive. Good quail habitat consists of grassy/weedy areas for quail to nest, roost, and raise broods; well-distributed patches of brushy cover for loafing and escaping predators; abundant food resources; and enough interspersed patches of bare ground to facilitate movement and foraging. Above all, quail thrive where plant diversity is high. Large blocks of land in the same type of cover — whether row crops, grass, or brush — is rarely good quail habitat. Management practices such as prescribed burning, disking, and prescribed grazing can be used to produce and promote good quail habitat.



DID YOU KNOW?

Not all bobwhite nests are incubated by hens! Many times the rooster will take over incubation duties, allowing the hen to lay and hatch another nest.

ONGOING QUAIL RESEARCH

Perhaps no bird in America has been more studied than the bobwhite. Yet for all that biologists have learned about this bird, knowledge cannot compensate for loss of habitat.

Recently, the Department began a project in southwest Missouri to better understand bobwhite response to different management techniques. Recently, managers on a few conservation areas in Dade and Lawrence counties noted that quail on large, diverse grasslands initiated covey break up and nested several weeks earlier than coveys on nearby areas managed using crop strips, nesting patches, and brushy hedgerows.

Preliminary investigations suggested that total production may be greater on these diverse grasslands. Those observations led researchers on four conservation areas to band and apply radio transmitters to dozens of bobwhites to determine if this scenario holds true on other areas as well. It is believed that the superior nesting and brood-rearing habitat provided on grassland-dominated areas managed with fire and grazing may result in higher nest success and total production. Several more years of study should help determine if this hypothesis is true.

Hunters who harvest a quail with an aluminum leg band or radio transmitter are asked to report it to the nearest Department office.

2014 FEATURED HUNTING SPOTS

Bobwhites can be found on many conservation areas across the state. While many of these areas provide quail hunting opportunity, several are designated as Quail Emphasis Areas (QEAs) and are managed with quail as a main focus. Managers' Notes from a sample of QEAs are also available starting on Page 20 of this report.

Hunters might wish to explore the following QEAs:

Bois d'Arc CA (Greene Co.)

Bonanza CA (Caldwell Co.)

Crowley's Ridge CA (Stoddard Co.)

Henry Sever Lake CA (Knox Co.)

J.N. Kearn Memorial WA (Johnson, Pettis Counties)

Maintz Wildlife Preserve (Cape Girardeau Co.)

Poosey CA (Grundy, Livingston Co.)

Robert E. Talbot CA (Lawrence Co.)

Whetstone Creek CA (Callaway Co.)

White Memorial WA (Lincoln Co.)

White River Trace CA (Dent Co.)



Want better quail hunting? Take aim at habitat.

Good brood habitat is the most important habitat factor in most places. Weed patches tend to attract many insects needed by growing chicks and produce lots of seeds eaten in the fall and winter. But in today's landscape, weed patches are increasingly scarce.

For technical assistance in providing brood habitat and other quail needs, contact your local Private Land Conservationist or visit mdc.mo.gov/node/3678.

FROG

AMERICAN BULLFROG GREEN FROG

ABOUT FROGS

Bullfrogs and green frogs look similar but are easy to tell apart from other frogs in Missouri, due to their relatively large size at maturity. They prefer aquatic edge habitats that offer still, shallow water with aquatic and/or terrestrial vegetation. This provides both cover and food, such as insects and nearly any other small animal that will fit in their mouths. Ponds, lake and river banks, wetlands, and other vegetated waterways are all great places to find frogs. During or after a rain, frogs can be found anywhere as they attempt to locate new habitats.



American
bullfrog



Green frog

HUNTING AND MANAGEMENT

Pursuing frogs is very popular in Missouri, partly because hunters are permitted to hunt frogs with so many different methods. With a fishing permit, frogs may be taken by gig, trotline, throw line, limb line, bank line, jug line, snagging, snaring, grabbing, or pole and line. With a hunting permit, by crossbow, pellet gun, or .22 or smaller caliber rim-fire rifle or pistol, and with either permit by hand, hand net, bow or atlatl. They may also be pursued during the day or at night with an artificial light. During a full moon, frogs are typically more skittish because they feel more exposed, and are thus more difficult to approach. During a new moon, it is usually easier to get closer to them. Because frogs are amphibious and must keep their skin moist, they spend more time in the water and weeds during the day and are generally less visible around the banks than at night. Whether they're hiding or not, their location is often given away by their assertive croaks.

"Frogging" is a great way to introduce kids to hunting. Lethal weapons are not required, and froggers can catch and release if they want. Catching frogs by hand or hand net is exciting, since kids can get closer to frogs than to other small game species, and most youngsters enjoy chasing a jumping, splashing, evasive frog around weeds and water.

Public and private landowners typically do not manage for frogs. Instead, frog populations are often the result of management for another species such as waterfowl or fish. Frogs are also common in aquatic edge habitats not subject to management or maintenance of any kind. Waters with few to no predators will yield the best frog populations.



VEGETATION THAT ATTRACTS FROGS

- • • • •
- Cattails
- Willows
- Millet
- Various types of aquatic vegetation
- Grasses at water's edge or overhanging a bank

2014 FEATURED HUNTING SPOTS

Bullfrogs and green frogs can be found along nearly all waterways on Department conservation areas but especially on wetland areas and along rivers and lakes.

Froggers may want to try the suggested areas listed below. Please contact the area before frogging, as some areas may experience seasonal waterfowl refuge closures.

Duck Creek CA (Bollinger, Stoddard, Wayne
Counties)

Eagle Bluffs CA (Boone Co.)

Grand Pass CA (Saline Co.)

J.N. Kearn Memorial WA (Johnson, Pettis Counties) Counties)

Rebel's Cove CA (Putnam, Schuyler Counties)

Robert E. Talbot CA (Lawrence Co.)

Ten Mile Pond CA (Mississippi Co.)

Whetstone Creek CA (Callaway Co.)

Woodson K. Woods Memorial CA (Crawford, Phelps



RING-NECKED PHEASANT

ABOUT PHEASANTS

Ring-necked pheasants were introduced to the United States from China in the 1880s and have become one of the nation's most popular game birds. Unlike most species not native to an area, pheasants have made few negative impacts on our native wildlife. Rather than displacing native species, pheasants have been able to thrive in agricultural areas where some native species, such as prairie chickens, have not. Early agricultural practices including the planting of small grain crops, large native grass hayfields, and weedy crop fields provided excellent nesting and brood-rearing habitat for the birds. Intensification of agriculture and the loss of Conservation Reserve Program, or CRP, acres throughout the Midwest have led to a decrease in pheasant habitat across its established range.



Ring-necked pheasant

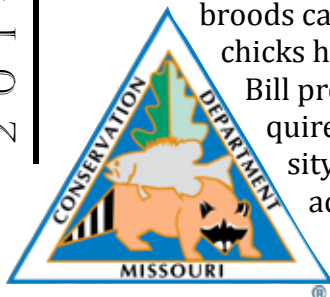
HUNTING AND MANAGEMENT

Pheasant hunting requires little equipment and can be a great way to spend time outdoors. Hunters in pursuit of other small game, usually bobwhite quail, often flush and take pheasants. Well-trained bird dogs are an asset for hunting large, grassy fields, but a few hunters walking side-by-side across a field can also produce and experience the explosive flush of a pheasant.

In an effort to bolster populations, wild pheasants from existing populations in Missouri, Kansas, Nebraska, and South Dakota were released from 1987-2000. Some areas continue to hold steady populations of birds, some maintain few birds, and others never established successful populations. Pheasant harvest in Missouri peaked in 1990 with 24,479 hunters harvesting nearly 90,000 birds. In the 2010-2011 season, 6,163 hunters harvested just over 16,000 birds.

Landowners in the pheasant's Missouri range can improve populations by providing ample nesting and brood-rearing habitat. Pheasant hens typically nest in grassy fields. Native warm-season grass mixes and brome fields tend to provide good nesting opportunity, and as with bobwhite quail, quality brood-rearing habitat is essential for pheasant populations to flourish. Diverse patches of mixed grasses, weeds, and forbs attract hundreds of insect species that pheasant chicks eat to fuel their rapid growth. Alfalfa and clover fields provide good brooding habitat, but many nests and broods can be lost in these fields if hay cutting occurs before mid- to late-July before chicks hatch or when they're too small to escape the mower. If you participate in Farm

Bill programs such as the CRP or the Environmental Quality Incentive Program, inquire about practices such as CP-25 or CP-42. These promote plant and insect diversity and can greatly enhance habitat conditions for pheasants. Other management activities that benefit pheasants include shrub plantings, prescribed burning, and avoiding fall tillage of crop stubbles. Pheasants are well adapted to agricultural landscapes, but it's critical to provide the habitat components they need.



PHEASANT MYTHS AND FACTS

- **Myth:** Stocking helps restore populations.
Fact: Many studies have shown that stocked birds have a hard time establishing self-sustaining populations. Predators take about 90 percent of released birds.
- **Myth:** High predator numbers have reduced pheasant numbers.
Fact: Most predators will eat birds, chicks, or eggs, but birds have adapted to withstand high levels of predation by producing many young. Habitat loss is the number one cause of population declines, and predator problems are intensified by reduced habitat.
- **Myth:** Hunting lowers the pheasant population.
Fact: Hens are protected from harvest and roosters are polygynous, meaning that one rooster mates with multiple hens. Rooster-only seasons have very little impact on population size.

2014 FEATURED HUNTING SPOTS

Pheasants are most abundant in northwest Missouri and portions of northeast Missouri. Conservation areas with good populations of pheasants are few. For more detailed information, call the Department's Northwest or Northeast Regional Office (contact info can be found on the Table of Contents page of this publication).



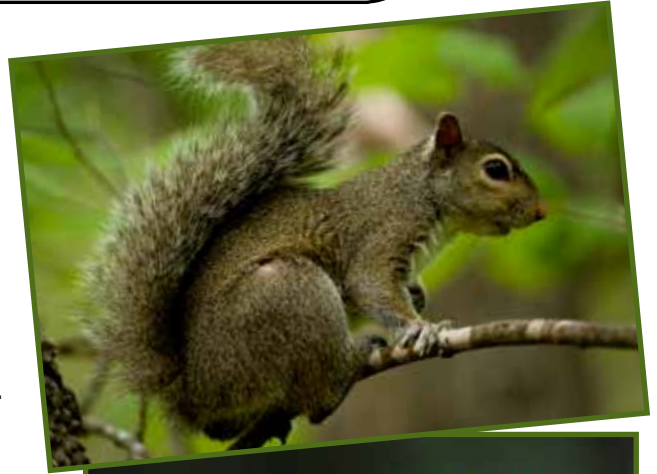
SQUIRREL

EASTERN GRAY FOX

Eastern gray squirrel

ABOUT SQUIRRELS

In Missouri, hunters may pursue two species of tree squirrels — fox squirrels, called “red squirrels” by many, and eastern gray squirrels. Fox squirrels are the larger of the two species. They tend to be found near the edges of timber stands, in isolated woodlots and open woods without much understory, along timbered ridges and uplands, and even in hedgerows. Grays are more likely to occur in extensive tracts of forest and bottomlands, but it’s not unusual to find both species using the same area.



HUNTING AND MANAGEMENT

Few game species are as widespread and underused across Missouri as squirrels. Several decades ago, squirrel hunting was very popular, but today it’s common to have the woods to yourself. Squirrel hunting is a great introduction to hunting for young hunters. No specialized gear is needed, opportunities are frequent, and stealth and silence are not as critical as for deer or turkey hunting. Hunting squirrels is a great sport for seasoned hunters too. It hones observation skills and marksmanship, and it offers a chance to scout for other game such as deer or turkey. And, of course, a successful hunt results in some wonderful table fare.

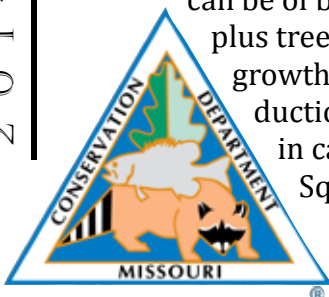


Fox squirrel

Gray squirrels are early risers and become active at sunrise, while fox squirrels tend to come out later in the morning and are active during mid-day. The activity of both species slows considerably in the mid-day hours on hot, humid summer days.

Hunters new to squirrel hunting should remember to move slowly through the woods, scanning the treetops for movement, and listening for the sounds of bushytails jumping from limb to limb or cutting and dropping nut hulls. Upon finding a lot of fresh cuttings on the ground, find a comfortable spot nearby and sit down awhile — you’ll usually have a shot or two shortly.

Lands are rarely managed specifically for squirrels, but some common management practices can be of benefit. Timber stand improvement (TSI) involves the removal of inferior or surplus trees to thin a stand and allow the remaining trees to experience better health and growth. An added bonus of TSI is that mast (acorns, nuts, or other fruiting bodies) production often increases, too, providing abundant food resources. Squirrels often nest in cavities and hollow trees, so some of these should be retained on your property. Squirrels will readily use nest boxes as well.



WHAT DO SQUIRRELS EAT?

Knowing what foods squirrels eat throughout the year may help you find them while hunting. Here are some commonly eaten foods that squirrels choose.

- **Spring:** buds, twigs, flowers, mushrooms, seeds of elms, maples, and oaks
- **Summer:** mulberries, hickory nuts, acorns, corn, walnuts, wild grapes, mushrooms, Osage orange fruit (hedgeapples)
- **Fall:** hickory nuts, pecans, acorns, walnuts, corn, Osage orange fruit (hedgeapples)
- **Winter:** nuts, acorns, bark, corn, buds

2014 FEATURED HUNTING SPOTS

Below are suggested areas that offer squirrel hunting opportunities:

Apple Creek CA (Cape Girardeau Co.)

Big Buffalo Creek CA (Benton, Morgan Counties)

Bluffwoods CA (Buchanan Co.)

Busiek Wildlife Area (Christian Co.)

Current River CA (Carter, Reynolds, Shannon Counties)

Deer Ridge CA (Lewis Co.)

Huzzah CA (Crawford Co.)

Little Indian Creek CA (Franklin, Washington Counties)

Reed Memorial Wildlife Area (Jackson Co.)

Rudolf Bennett CA (Boone, Howard, Randolph Counties)

Sunklands CA (Shannon, Texas Counties)

DID YOU KNOW?

A plague of squirrels? There is an 1839 account of a massive squirrel invasion of Missouri farms near the Missouri River. Historic accounts report that hundreds of thousands of squirrels raided crop fields — many or most even swam across the Missouri River from the north! Likewise, in Wisconsin in 1842, we find accounts of a squirrel migration that lasted for 4 weeks and may have involved a half-billion gray squirrels!



RAILS AND SNIPE

VIRGINIA RAIL SORA COMMON SNIPE

ABOUT RAILS AND SNIPE

Several rail species migrate through Missouri every year, including yellow, Virginia, sora, black, and king rails. Virginia and sora rails are the only two species that may be harvested, and sora is the most abundant of these. Rails are predominantly marsh birds and can be seen and heard on many wetland conservation areas lurking in thick vegetation. Rails are omnivores and eat a wide variety of plants, insects, snails, and crayfish with their long bill made for probing in moist soils.

The common snipe is aptly named, because it is common in Missouri's wetlands and soggy areas. This marsh bird uses its long bill to probe for insects, worms, and larvae that burrow in damp soil.



Virginia rail



Sora



Common snipe

HUNTING AND MANAGEMENT

Rails and snipe are a challenge to hunt. When flushed, these birds only fly a short distance and dive back into vegetative cover. Once back on the ground, the birds run quickly and are very hard to flush a second time. During peak migration, sora rails are abundant and will react to loud sounds such as a car door slamming or single, loud hand claps. Sora rails have several calls including a descending "whinny," a "ker-wee" sound, and a call that sounds like "weep." Snipe calls are a repeated "chip." The call of the Virginia rail sounds like pig-like grunts, "kid-dik."

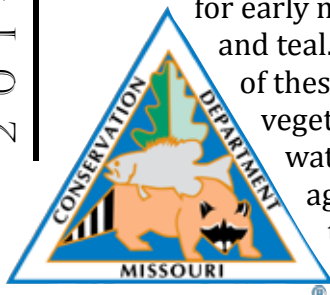
Being secretive, rails are found in dense moist soil vegetation in water varying from 0-28 inches. Research has shown that sora rails prefer water depth ranging from 2-6 inches in the fall, while Virginia rails prefer slightly shallower water less than 2 inches. Snipe tend to be found at the edges of pools where water and vegetation meet.

In most wetlands, areas of lower elevation in a pool never dry, unless the summer is extremely dry. These areas produce tall, thick wetland vegetation. In late August, water pumps at some managed wetland areas are turned on and wetland pools slowly fill to create habitat

for early migrants such as rail, snipe, shorebirds, and teal. Water is allowed to spill into the edges of these lower areas to irrigate native moist soil vegetation, which is a good food source for waterfowl. Muddy flats created by this management are great stopover habitat along the migration routes of shorebirds and snipe.

"Thin as a rail"

The bodies of rails are laterally compressed, and the feathers can be held tightly against the body when necessary to allow the bird to slip easily through very narrow spaces — like crowded marsh vegetation!



ONGOING MARSH-BIRD RESEARCH

Several research projects are being conducted on secretive marsh birds on conservation areas. Researchers are trying to determine the effects of different wetland management on marsh birds at different times of the year to better manage for their populations.

Studies include measuring birds' preferred water depth, vegetation type and density, plant height, and the amount of open water that these birds prefer in the spring and fall. In the fall of 2014, a research project will study the effects of early season flooding on fall migrating rails and snipe. On several areas, managers will flood one pool in August, which is nearly two months earlier than a normal season. Researchers will monitor rail and waterfowl use of this early flooded pool, and compare the use to other pools that are flooded later in the season.

Each year, marsh bird surveys are also conducted on several Department areas. These surveys use a playback of recorded rail and bittern calls to attract a response from birds hiding in the vegetation to determine whether they are present in an area or not. Birds that are heard or seen are mapped and these birds' numbers are tracked each year.

2014 FEATURED HUNTING SPOTS

Rail and snipe hunting opportunities are very limited by weather, especially precipitation. Contact the area manager at the areas you are interested in before hunting.

Below are suggested areas that offer rail and snipe hunting opportunities:

B.K. Leach CA (Lincoln Co.)

Duck Creek CA (Bollinger Co.)

Four Rivers CA (Bates, Vernon Counties)

Marais Temps Clair (St. Charles Co.)

Otter Slough CA (Butler, Stoddard Counties)

Schell-Osage CA (Saint Clair, Vernon Counties)

Ted Shanks CA (Pike Co.)



It is easy to see why the common snipe is included in a group of birds coined "secretive marsh birds." These birds' impressive camouflage (as seen above) and relative silence keep them well-hidden in the thick vegetation of marshy habitats.

DID YOU KNOW?

The American coot is in the rail family. Unlike the other rails, the coot is duck-like, less secretive, and is hunted during waterfowl season.

AMERICAN WOODCOCK

ABOUT WOODCOCK

A migratory species, American woodcock visit Missouri in the fall and spring on their way to and from their wintering grounds in the southeastern states. The woodcock is unique among Missouri's game birds in that it is classified as a shorebird, but it spends nearly all of its life in upland forests, forest edges, old fields and meadows. Look for woodcock during the fall hunting season in brushy thickets and bottomland timber during the day and in open fields for roosting at night.



American woodcock

HUNTING AND MANAGEMENT

Woodcock are often overlooked as a game bird in Missouri, and most birds are harvested in pursuit of other game, such as bobwhite quail. Woodcock, however, provide excellent sport when specifically targeted because they readily hold for bird dogs, they can be abundant during the peak of migration, and they are often found on the Department's conservation areas. Woodcock are fun to hunt because they are tricky fliers that can test even the best upland gunner.

Woodcock season in Missouri begins mid-October and the best hunting during that time is in the northern part of the state. As the birds move south through the state during fall migration, hunting improves. The first two weeks of November are the peak of bird numbers in south Missouri. Hunters should target brushy thickets in old fields, thickly wooded draws in agricultural landscapes, young timber cutovers, and bottomland timber. To help narrow the search for occupied habitat, savvy hunters will look for the half-dollar-sized white splash indicative of woodcock droppings.

The Department's public land managers provide quality hunting for American woodcock by creating and maintaining early and mid-successional habitat that are critical for the birds. Management efforts such as prescribed burning, woodland restoration, and timber harvests are all used to create these types of habitat. Fortunately, this management is occurring on conservation areas across the state to improve habitat for a variety of wildlife.

The woodcock's twittering wing beats at takeoff are unmistakable. You can listen to the wingbeats and its "peent" call at mdc.mo.gov/node/2821.



ONGOING WOODCOCK RESEARCH

Researchers at the University of Arkansas are currently studying which types of habitat American woodcock use along their spring migration routes. Department staff are helping in that effort by collecting data at woodcock singing grounds. This information will be used to better describe habitat used by woodcock and thus, help managers to better conserve those habitats. A second University of Arkansas research project involves tagging woodcock with satellite transmitters and monitoring migration timing and routes. This research will help identify areas where habitat management for woodcock is most needed.

2014 FEATURED HUNTING SPOTS

Conservation areas with suitable woodcock habitat can be found across the state. It is always a good idea to call the area manager or local wildlife biologist for tips on hunting locations and bird numbers in specific areas. The migratory nature of woodcock can mean that areas can fill up with birds seemingly overnight. On the other hand, strong cold fronts can push birds out of an area just as fast!

Below are suggested areas that offer woodcock hunting opportunities:

Indian Hills CA (Scotland Co.)

Union Ridge CA (Adair, Putnam, Sullivan
Counties)

Maintz Wildlife Preserve (Cape Girardeau Co.)

Stockton Lake Managed Lands (Cedar, Dade, Polk
Counties)



DID YOU KNOW?

A common name for
the American
woodcock is the
“timberdoodle.”

BOWFISHING

ABOUT BOWFISHING

Bowfishing doesn't refer to a species. Instead, it is the pursuit of fish with a bow and arrow. This is a legal method to pursue nongame fish. Nongame fish include bluegill, green sunfish, carp, carpsuckers, suckers, buffalo, drum, gar, and all other species not defined as game fish or listed as endangered in the Wildlife Code of Missouri. Bowfishing offers an exciting way to pursue these fish that typically draw little interest with more traditional pole-and-line or setline methods.

Bowfishing is not really fishing at all, but a hunt for fish. Although the word "fishing" is in the sport's name, bowfishing is more similar to small game hunting than to fishing. Still, a fishing license is needed to bowfish. Fishing uses hooks, and fish aren't typically seen during an angler's pursuit of them. Bowfishing is quite different in that fish are first spotted and then shot at with a bow or crossbow. The bow or crossbow shoots arrows attached to a line so that the fish can be retrieved after they're pierced. Due to the water's refraction, connecting with a fish is harder than one would think. The deeper the fish in the water, the more refracted it is by the water. The angler has to compensate for this refraction, making the shot more difficult. The tendency is to shoot over the fish, so learning how to adjust the shot at a moment's notice on a moving target can prove quite tricky.

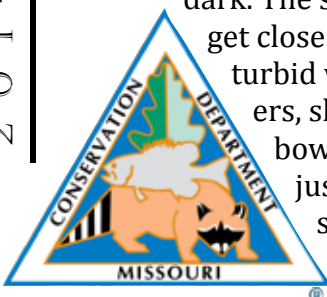


A bowfisherman shoots at a fish below the surface with an arrow attached to a line to retrieve the speared fish.

HOW TO BOWFISH

Fish can be successfully pursued during the day, but many people bowfish at night when fish are often more active and more visible than in the daylight. Old-timers used small, wood-burning fires in baskets hanging over a boat's bow to illuminate the water at night. These were later replaced by oil lamps and lanterns. Today, halogen lights powered by a gas generator or LED lights are commonly used. Bowfishers without boats use handheld lights along the banks or other vantage point. Moonlight alone does not provide sufficient light for locating and properly identifying fish.

The moon phase and water clarity play an important role in bowfishing. During a full moon, fish are typically more skittish because they feel more exposed, and can be more difficult to get close to; during a new moon, it is often easier to get closer to them as they feel more hidden in the dark. The same goes for water clarity – the clearer the water, the more difficult it can be to get close to fish even though you can see them better. The opposite is true of murky or turbid waters. Because fish are pursued by sight and most legal fish are bottom feeders, slowly cruising the shores and still backwaters are generally most productive for bowfishing. Fish will typically be seen feeding in the substrate, along the shore, or just loafing. Smooth, still water is most conducive for proper fish identification and shooting; choppy water makes it more difficult. During the day, the use of polarized sunglasses aids in reducing the glare on the water and enhances visibility.



POINTERS

- Staying on the move and covering a lot of water is more successful than staying in one spot.
- If your mobility is restricted, try chumming the water with soured corn, canned corn, grain and molasses pellets, dog food, or cereal to encourage fish to come to you.
- Cautiously closing the distance is the key to getting a shot, but fish can appear and disappear from anywhere in the water at any time. The action can be quite unpredictable to say the least!

BOWFISHING MANAGEMENT

Because nongame fish are pursued and harvested at significantly lower rates than game fish, their populations are typically abundant. The Department conducts some dedicated management for species like alligator gar, working to restore these fish to their former native habitat in southeastern Missouri in recent years.

Invasive species control helps to protect native fish species in Missouri waterways. These invasive species include silver, bighead, grass, and common carp, as well as goldfish. Regulations and other public awareness initiatives to prevent invasive species from inhabiting new waters are ongoing, and regulations permit unlimited harvest and no closed season on these invasive species to encourage unrestricted harvest.

2014 FEATURED HUNTING SPOTS

Many conservation areas don't support an adequate rough fish population or an area large enough to offer ample bowfishing opportunities and therefore don't permit bowfishing. Access to large lakes, reservoirs, and rivers provide the best opportunity and success for bowfishing. Try many waters by way of Department accesses, or consider one of these suggested areas:

Conservation areas:

B.K. Leach Memorial CA (Lincoln Co.)

Franklin Island CA (Howard Co.)

Otter Slough CA (Butler, Stoddard Counties)

Pony Express Lake CA (DeKalb Co.)

Ted Shanks CA (Pike Co.)

Thomas Hill Reservoir CA (Macon, Randolph Counties)

Schell-Osage CA (St. Clair, Vernon Counties)

Large lakes and reservoirs:

Clearwater Lake

Lake of the Ozarks

Lake Taneycomo

Lake Wappapello

Pomme de Terre Lake

Smithville Reservoir

Stockton Lake

Table Rock Lake

Thomas Hill Reservoir

Truman Reservoir

QEA MANAGERS' NOTES

Area managers of a sample of the Department's Quail Emphasis Areas (QEAs) talk about the small game hunting outlook, weather, and management for small game on their areas.

Bois D'Arc CA (Greene Co.; 417-895-6880) The area has experienced more rainfall than normal this year. To improve small game habitat, we have created new brush piles and conducted edge feathering to improve shrubby cover. The area is surveyed for rabbit and quail during the summer breeding season and in the fall for quail. Observations from this year's summer surveys point to good numbers of both rabbit and quail; the area also has a good population of woodcock. All hunters on the area must check in and out to get a free daily hunter card.

Bunch Hollow CA (Carroll Co.; 660-646-6122) While this past winter was very long with below average temperatures, initial surveys indicate that the quail population was not severely affected. We completed the removal of over 50 acres of overgrown brush in some old field habitats. Spring whistling surveys for quail were higher this year than in the past three years. Bunch Hollow has good populations of squirrel and rabbits. A valid daily hunting tag is required at Bunch Hollow, and all hunters must check out immediately after the close of their hunting trip.

Davisdale CA (Howard Co.; 573-815-7900) The area has experienced several heavy rainfall events in spring and into summer, which may have had an impact on ground-nesting birds. Late winter and spring weather conditions allowed us to use prescribed fire for habitat improvement. As a result, brood-rearing habitat looks great this season. Good planting conditions have resulted in a great sunflower crop this year as well. Rabbit and squirrel numbers look good, and we expect to attract doves come migration time. Staff has reported seeing more rabbits on the area this year compared to last year. Old field edges and edge-feathered areas provide the best locations for rabbit hunting. We focus on providing well-distributed habitat, which may be difficult to hunt, because it is spread across the area. All hunters are required to complete and carry a daily hunting tag which is free and available at area parking lots.

Happy Holler Lake CA (Andrew Co.; 816-271-3100) The area has not experienced any localized weather impacts on small game this year. We are working on the suppression of cool season grasses, and moving some of our plantings on the area from corn to milo, and idling more acres to improve small game habitat. Hunters will find good numbers of rabbits and doves, in addition to quail. We have been seeing more quail and rabbits on the area this year compared to last year. For quail hunting, it may be to your advantage to arrive on the area early to listen for fall covey calls in order to determine where on the area to start your hunt.



Henry Sever Lake CA (Knox Co.; 660-785-2420) The winter of 2013-2014 brought heavy snow and extremely cold weather, and the area also experienced some periods of heavy rain in early June. We conducted a large burn this year in a woodland unit and opened up the stand of trees, and subsequently heard quail whistling in this area for the first time this year. Rabbits, squirrel, and doves are also seasonally abundant at Sever Lake. To have a successful quail hunt at Sever Lake, it's best to use dogs in good cover and venture off the beaten path.

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Maintz Wildlife Preserve (Cape Girardeau Co.; 573-290-5730) The area experienced a cooler, wet spring that may have had an impact on turkey numbers, but mid to late spring warmed up and became more like normal temperatures. Current management on the area includes a burn rotation to improve quail and rabbit habitat and a sunflower management program for doves. Quail numbers continue to improve on the area, and doves should find the sunflowers this fall. Last year, hunters harvested over 3,000 doves over 35 acres of sunflowers.

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Poosey CA (Grundy, Livingston Counties; 660-646-6122) The area has not experienced any severe weather impacts to the quail population this year. In addition to quail, Poosey offers good opportunities to hunt rabbit, squirrel, bullfrogs, and doves. Poosey has a good amount of quail habitat, but hunting pressure is high. Quail quickly become wary of hunters and are difficult to find after the first week of the season. The bulk of small game habitat is found south of Highway A on the area.

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Stockton Lake Management Lands (Cedar, Dade, Polk Counties; 417-895-6880) The area has not experienced any severe weather impacts to the quail population this year. We removed several narrow strips of timber that fragmented parcels of open land to create a more open grassland landscape and improve quail habitat. Quail numbers are fair in select parcels, and the rabbit and squirrel populations are very good. Stockton Lake also provides some of the highest woodcock densities in the southwest region. The woodcock population can change very quickly at the area; hunters should hunt around dense stands of plum and sumac in old fields. If hunters happen to visit the area on a migration day, it is possible to flush 10-20 woodcock in a morning.

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Whetstone Creek CA (Callaway Co.; 573-815-7900) The area experienced some heavy rainfall in early spring, but it's too soon to tell if it has made an impact on the quail population. In addition to quail, Whetstone boasts a good rabbit population. We are currently conducting several research projects including a managed deer hunting study, an herbicide study to determine effectiveness in reducing heavy grass cover, and we will begin a cover crop and forb study later this year. The area's management has been focused on reducing warm-season grasses that have become too thick to provide quality wildlife habitat. These changes have helped our turkey and rabbit populations and we are seeing more grassland bird species on the area. It's important to note that quail hunting at Whetstone closes on December 15th.



White River Trace CA (Dent Co.; 573-368-2225) The area has not experienced any severe weather impacts on small game this year. We continue to improve small game habitat over the area using several management practices including prescribed fire, edge feathering, and disking. Rabbits, doves, squirrel, and woodcock can also be found on White River Trace. It is important to note that quail hunting on this area closes December 15th.

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William G. and Erma Parke White Memorial Wildlife Area (Lincoln Co.; 636-441-4554) The area has experienced a few localized heavy rain events this spring. We have conducted 180 acres of woodland thinning and 15,900 feet of edge work to improve cover for small game. We are seeing lots of rabbits this year as a result.



*Thank you for your interest,
and happy hunting!*